

Benefits of Cryotherapy



Medically reviewed by [Debra Rose Wilson, PhD, MSN, RN, IBCLC, AHN-BC, CHT](#) on September 15, 2017 — Written by Ana Gotter

[Benefits](#) [Risks and side effects](#) [Tips and guidelines](#) [Takeaway](#)



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Cryotherapy, which literally means “cold therapy,” is a technique where the body is exposed to extremely cold temperatures for several minutes.

Cryotherapy can be delivered to just one area, or you can opt for whole-body cryotherapy. Localized cryotherapy can be administered in a number of ways, including through ice packs, ice massage, coolant sprays, ice baths, and even through probes administered into tissue.

The theory for whole-body cryotherapy (WBC) is that by immersing the body in extremely cold air for several minutes, you could receive a number of health benefits. The individual will stand in an enclosed chamber or a small enclosure that surrounds their body but has an opening for their head at the top. The enclosure will drop to between negative 200–300°F. They’ll stay in the ultra-low temperature air for between two and four minutes.

You can get benefits from just one session of cryotherapy, but it’s most effective when used regularly. Some athletes use cryotherapy twice a day. Others will go daily for 10 days and then once a month afterwards.


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Benefits of cryotherapy


1. Reduces migraine symptoms

Cryotherapy can help treat migraines by cooling and numbing nerves in the neck area. [One study found](#)  that applying a neck wrap containing two frozen ice packs to the carotid arteries in the neck significantly reduced [migraine](#) pain in those tested. It's thought that this works by cooling the blood passing through intracranial vessels. The carotid arteries are close to the skin's surface and accessible.

2. Numbs nerve irritation

Many athletes have been using cryotherapy to treat injuries for years, and one of the reasons why is that it can [numb pain](#). The cold can actually numb an irritated nerve. Doctors will treat the affected area with a small probe inserted into the nearby tissue. This can help treat pinched nerves or neuromas, chronic pain, or even acute injuries.

3. Helps treat mood disorders

The ultra-cold temperatures in whole-body cryotherapy can cause physiological hormonal responses. This includes the release of adrenaline, noradrenaline, and endorphins. This can have a positive effect on those experiencing mood disorders like anxiety and depression. [One study found](#)  that whole-body cryotherapy was actually effective in short-term treatment for both.

4. Reduces arthritic pain

Localized cryotherapy treatment isn't the only thing that's effective at

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physiotherapy and occupational therapy as a result. This ultimately made rehabilitation programs more effective.


5. May help treat low-risk tumors

Targeted, localized cryotherapy can be [used as a cancer treatment](#). In this context, it's called "cryosurgery." It works by freezing cancer cells and surrounding them with ice crystals. It's currently being used to treat some low-risk tumors for certain types of cancer, including [prostate cancer](#).

6. May help prevent dementia and Alzheimer's disease

While more research is needed to evaluate the effectiveness of this strategy, it's theorized that whole-body cryotherapy could help prevent Alzheimer's and other types of dementia. [It's thought that](#)  this may be an effective treatment because the anti-oxidative and anti-inflammatory effects of cryotherapy could help combat the inflammatory and oxidative stress responses that occur with [Alzheimer's](#).

7. Treats atopic dermatitis and other skin conditions

Atopic dermatitis is a chronic inflammatory skin disease with signature symptoms of dry and itchy skin. Because cryotherapy can [improve antioxidant levels](#)  in the blood and can simultaneously reduce inflammation, it makes sense that both localized and whole-body cryotherapy can help treat [atopic dermatitis](#). Another [study](#) (in mice) examined its effect for acne, targeting the sebaceous glands.

Risks and side effects

The most common side effects of any type of cryotherapy are numbness, tingling, redness, and irritation of the skin. These side effects are almost always temporary. Make an appointment with your doctor if they don't resolve within 24 hours.

You should never use cryotherapy for longer than is recommended for

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home, you should never apply ice to the area for more than 20 minutes. Wrap ice packs in a towel so you don't damage your skin.

Those with [diabetes](#) or any conditions that affect their nerves should not use cryotherapy. They may be unable to fully feel its effect, which could lead to further nerve damage.

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Tips and guidelines for cryotherapy

If you have any conditions you want to treat with cryotherapy, make sure you discuss them with the person assisting with or administering your treatment. It's always a good idea to consult your doctor before using any type of therapy.

If receiving whole body cryotherapy, wear dry, loose-fitting clothing. Bring socks and gloves to protect from frostbite. During therapy, move around if possible to keep your blood flowing.

If you're getting cryosurgery, your doctor will discuss specific preparations with you beforehand. This may include not eating or drinking for 12 hours beforehand.

Takeaway

There is plenty of anecdotal evidence and some research supporting the

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talk to your doctor or healthcare provider to assess whether it's right for you.

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